

What is claimed is:

1. A conversation support apparatus, comprising:

picture capture means for capturing pictures of a first user and a second user;

5 first conversion means for converting first picture information of the first user, whose picture has been captured, into first information that the second user is capable of perceiving;

second conversion means for converting second picture information of the second user, whose picture has been captured, into second information that the first user is capable of perceiving;

first display means, having a first display screen, for displaying the first information, which has been converted, on the first display screen; and

15 second display means, having a second display screen capable of being placed at an angle different from the angle of the first display screen, for displaying the second information, which has been converted, on the second display screen.

2. The conversation support apparatus as set forth in claim 1, further comprising:

sound collection means for collecting sound of the first user; and

25 third conversion means for converting the collected sound into the first information.

3. The conversation support apparatus as set forth in

claim 1,

wherein the first conversion means converts the first picture information into one of character information and sign information as the first  
5 information.

4. The conversation support apparatus as set forth in claim 1,

wherein the first conversion means converts the first picture information into sound information as the  
10 first information, and

wherein the conversation support apparatus further comprises:

output means for outputting the converted sound information.

15 5. The conversation support apparatus as set forth in claim 1,

wherein the first display means has:

second information display means for displaying the second information on the first display screen.

20 6. The conversation support apparatus as set forth in claim 5,

wherein the first display means displays the second information nearly in synchronization with timing the second display means displays the second  
25 information.

7. The conversation support apparatus as set forth in claim 3,

wherein when the first conversion means converts the first picture information into character information and sign information, the first display means displays the sign information, which has been  
5 converted by the first conversion means, on the first display screen, and

wherein the second display means displays the character information, which has been converted by the first conversion means, nearly in synchronization with  
10 timing the first display means displays the sign information.

8. The conversation support apparatus as set forth in claim 2, further comprising:

measurement means for measuring a sound pressure  
15 level or a noise level of sound of the first user;

setting means for setting a threshold value of the sound pressure level or the noise level; and

execution means for causing the third conversion means to execute a conversion process when the measured  
20 sound pressure level or noise level is equal to or larger than the threshold value.

9. The conversation support apparatus as set forth in claim 2, further comprising:

measurement means for measuring a sound pressure  
25 level or a noise level of sound of the first user;

setting means for setting a threshold value of the sound pressure level or the noise level; and

execution means for causing the first conversion means to execute a conversion process when the measured sound pressure level or the noise level is equal to or larger than the threshold value.

5 10. The conversation support apparatus as set forth in claim 3, further comprising:

storage means for correlatively storing a plurality of picture patterns of lips of a person who pronounces sound and character information  
10 corresponding to sound that the person pronounces,

wherein the picture capture means captures a picture of the lips of the first user as the first picture information, and

wherein the first conversion means has:

15 picture pattern comparison means for comparing the captured picture information and each of the picture patterns,

picture pattern selection means for selecting one picture pattern corresponding to the captured lip  
20 picture information from the picture patterns corresponding to the compared result, and

character information extraction means for extracting the character information corresponding to the selected picture pattern.

25 11. The conversation support apparatus as set forth in claim 10,

wherein the storage means correlatively stores the

picture patterns of each of the plurality of people and  
the character information and stores lips shape  
patterns of each of the plurality of people, and

wherein the conversation support apparatus further  
5 comprises:

shape pattern comparison means for comparing the  
captured lip picture information and the shape  
patterns, and

shape pattern selection means for selecting a  
10 shape pattern that is the most similar to the captured  
lip picture information from the shape patterns  
corresponding to the compared result.

12. The conversation support apparatus as set forth in  
claim 3, further comprising:

15 storage means for correlatively storing a  
plurality of picture patterns of lips of a human who  
pronounces sound and sign information corresponding to  
sound that the human pronounces,

wherein the picture capture means captures a  
20 picture of the lips of the first user as the first  
picture information, and

wherein the first conversion means has:

picture pattern comparison means for comparing  
information of the captured picture of the lips of the  
25 first user and the picture patterns;

picture pattern selection means for selecting one  
picture pattern corresponding to the information of the

captured picture of the lips of the first user from the picture patterns corresponding to the compared result; and

sign information extracting means for extracting  
5 the sign information corresponding to the selected picture pattern.

13. The conversation support apparatus as set forth in claim 12,

wherein the storage means correlatively stores the  
10 picture patterns of each of the plurality of people and the sign information and stores lips shape patterns of each of the plurality of people, and

wherein the conversation support apparatus further comprises:

15 shape pattern comparison means for comparing the information of the captured picture of the lips of the first user and the shape patterns; and

shape pattern selection means for selecting one  
20 shape pattern that is the most similar to the information of the captured picture of the lips of the first user from the shape patterns corresponding to the compared result.

14. The conversation support apparatus as set forth in claim 4, further comprising:

25 storage means for correlatively storing a plurality of lips picture patterns of a person who pronounces sound and character information

corresponding to sound that the person pronounces,

wherein the picture capture means captures a picture of the lips of the first user as the first picture information, and

5            wherein the first conversion means has:

picture pattern comparison means for comparing the information of the captured picture of the lips of the first user and the picture patterns,

10           picture pattern selection means for selecting one picture pattern corresponding to the information of the captured picture of the lips of the first user from the picture patterns corresponding to the compared result, and

15           sound information extraction means for extracting the sound information corresponding to the selected picture pattern.

15. The conversation support apparatus as set forth in claim 14,

20           wherein the storage means correlatively stores the picture patterns of each of the plurality of people and the sign information and stores lips shape patterns of each of the plurality of people, and

wherein the conversation support apparatus further comprises:

25           shape pattern comparison means for comparing the captured lip picture information and the shape patterns, and

shape pattern selection means for selecting a shape pattern that is the most similar to the captured lip picture information from the shape patterns corresponding to the compared result.

5 16. The conversation support apparatus as set forth in claim 1,

wherein the first display means has a first portion that has a first end portion and in which the first display screen is disposed, and

10 wherein the second display means has a second portion that has a second end portion and in which second display screen is placed, the first end portion and the second end portion being connected so that the second display screen is capable of being twisted  
15 against the first display screen and the second display screen is capable of being folded to the first portion.  
17. The conversation support apparatus as set forth in claim 1, further comprising:

storage means for storing the first information;  
20 reproduction means for reproducing the first information stored in the storage means on the first display screen; and

trick play means for performing a trick play operation for the stored first information.

25 18. A conversation support method, comprising the steps of:

capturing a picture of a first user and a picture



of a second user;

converting first picture information of the  
captured picture of the first user into first  
information that the second user is capable of  
5 perceiving;

converting second picture information of the  
captured picture of the second user into second  
information that the first user is capable of  
perceiving;

10 displaying the converted first information on the  
first display screen; and

displaying the converted second information on the  
second display screen that is capable of being placed  
at an angle different from that on the first display  
15 screen.